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08/890,314	07/09/97	YAMAGISHI	H 06615/007001

SCOTT C HARRIS
FISH & RICHADSON
601 13TH STREET NW
WASHINGTON DC 20005

MM11/0226

EXAMINER

ABRAMS, N

ART UNIT

PAPER NUMBER

2839

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/890314

Applicant(s)

Yamagishi

Examiner

Abrams

Group Art Unit

2839

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-10 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-10 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d) clarification is required. If priority is claimed, the documents should be supplied in the next response.

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2839

Abstract, addition of numerals in parenthesis is suggested to aid the reader, see the Fuchigami patent. A new abstract on a separate sheet should be supplied. Also, line 6 "of" should be --for--, linen 8, after "terminals" --to prevent damage to the solder balls-- should be added. Line 10, "The" should be --In one embodiment (figs. 6A, 6B)--. At the end --~~A~~ cover (4) may be used and formed with a surfaces (4b) for first engaging the IC package and another surface (4a) for subsequently engaging the top surface of the floating member. The pin lower ends (1a) may be fixed in socket (1) or may be movably supported. --should be added.

Is the declaration, priority claim "No" box is checked, however in original papers priority of Japan application is claims. Clarification is required.

Specification page 9, lines 23, 24, page 10, line 25 and page 13, line 14 are unclear. Page 4, line 7, should "aperture" be --recess--? Also see pages 6, etc and claim 4. Page 12, linen 21 "7A" seems incorrect.

Specification is objected to as deficient under 31 CFR 1.71 with respect to the claims 1, 2 contact lower and end sections (1a) being "movably" and "fixedly" supported by the socket body (1). No discussion of such features is seen on pages 6, 7, 8, etc. of the specification. In addition, since only "one embodiment" is shown with respect to such features how can the same lower pin ends be both moveable and fixedly supported?

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claims 1, 2 "moveably" and

Art Unit: 2839

"fixedly" supported lower ends in separate embodiments must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Contact pin lower pin end support features lack enabling disclosure

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rios alone or in view of Masami, Busacco, Petersen and Japan 6-20396.

The Rios floating member 14 includes tapered holes in which upper pin ends 36 are movably supported and ledges are shown to regulate projection of upper pin ends. Such arrangement as also taught by Petersen, figs. 5, 6 also usable in Rios. Obvious, for claim 1 to form the contact lower ^{ends} to also be movably supported as are those of Busacco at 65, fig. 3. For claim 2, obvious the Rios lower pin ends could be fixedly supported. For claims 3, 5, obvious to form package terminals as solder balls in view of Masami and Japan and to use an inclined upper tip end as in Japan at 7 or to use contacts like 94, 95 of Masami that include rotatable parts

Art Unit: 2839

with inclined surfaces at 95b. Claim 4 readable on Rios cover 16, figs. 2, 3 with engagement to the IC and then to the floating member at 24. Claim 8 reads on step formed in Rios contact upper ends, 60 of Petersen and 95d of Masami. For claims 9, 10, Petersen, fig. 5 is also applied.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masami in view of Rios.

Fig. 13A is applied. Obvious that predetermined pressure could be obtained at upper terminal ends. Obvious to use Rios type cover (for claim 4). Also obvious to form pin ends 95 to project above top of member 84.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen in view of Rios, Masami, Japan patent, 203926, and Busacco.


Obvious predetermined pressures would be obtained at upper pin ends. Secondary references are used as above.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuchigami alone or in view of Rios, Masami, Busacco, Petersen and Japan 203926. Obvious that predetermined contact pressure could be obtained at upper ends. Secondary references applied as above. See Fuchigami pin shoulders 14e.

Art Unit: 2839

Any inquiry concerning this communication should be directed to N. Abrams at
telephone number (703) 308-1729.

Abrams/dc
February 23, 1999


NEIL ABRAMS
EXAMINER
ART UNIT 322